

Results - One shot - LlamaChat

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[Robot LLM tasks](#)

Task 1

Prompt

```
<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n</SYS>>\n\nThe behavior tree represents a mobile robot tasked to
visit two locations: (7,1) and (4,8). The available actions are: "moveTo"
[/INST] <root BTCPP_format="4">
  <BehaviorTree>
    <Sequence>
      <MoveTo x="7" y="1"/>
      <MoveTo x="4" y="8"/>
    </Sequence>
  </BehaviorTree>
</root> </s><s>[INST] The behavior tree represents a mobile robot tasked to
visit a sequence of locations: ((0,0), (2,3), (4, 7), (5, 11)). The
available actions are: "moveTo" [/INST]
```

Output

```
[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n</SYS>>\n\nThe behavior tree represents a mobile robot tasked to
visit two locations: (7,1) and (4,8). The available actions are: "moveTo"
[/INST] <root BTCPP_format="4">
  <BehaviorTree>
    <Sequence>
      <MoveTo x="7" y="1"/>
      <MoveTo x="4" y="8"/>
```

```

    </Sequence>
  </BehaviorTree>
</root> [INST] The behavior tree represents a mobile robot tasked to visit
a sequence of locations: ((0,0), (2,3), (4, 7), (5, 11)). The available
actions are: "moveTo" [/INST] <root BTCPP_format="4">
  <BehaviorTree>
    <Sequence>
      <MoveTo x="0" y="0"/>
      <MoveTo x="2" y="3"/>
      <MoveTo x="4" y="7"/>
      <MoveTo x="5" y="11"/>
    </Sequence>
  </BehaviorTree>
</root>

```

Task 2

Prompt

```

<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\nThe behavior tree represents a mobile robot tasked to
visit two locations: (7,1) and (4,8). The available actions are: "moveTo"
[/INST] <root BTCPP_format="4">
  <BehaviorTree>
    <Sequence>
      <MoveTo x="7" y="1"/>
      <MoveTo x="4" y="8"/>
    </Sequence>
  </BehaviorTree>
</root> </s><s>[INST] The behavior tree represents a mobile robot tasked to
visit a sequence of locations: ((0,0), (2,3), (4, 7), (5, 11)). Each
location is associated with a reading: (10, 20, 13, 27). Location with a
reading above 15 must be visited first. The available actions are: "moveTo"
[/INST]

```

Output

```

[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML

```

```
format.\n<</SYS>>\n\nThe behavior tree represents a mobile robot tasked to
visit two locations: (7,1) and (4,8). The available actions are: "moveTo"
[/INST] <root BTCPP_format="4">
  <BehaviorTree>
    <Sequence>
      <MoveTo x="7" y="1"/>
      <MoveTo x="4" y="8"/>
    </Sequence>
  </BehaviorTree>
</root> [INST] The behavior tree represents a mobile robot tasked to visit
a sequence of locations: ((0,0), (2,3), (4, 7), (5, 11)). Each location is
associated with a reading: (10, 20, 13, 27). Location with a reading above
15 must be visited first. The available actions are: "moveTo" [/INST] <root
BTCPP_format="4">
  <BehaviorTree ID="root">
    <Sequence>
      <Fallback>
        <Repeat num_cycles="1">
          <Sequence>
            <Action ID="moveTo" x="5" y="11"/>
          </Sequence>
        </Repeat>
        <Action ID="moveTo" x="4" y="7"/>
      </Fallback>
      <Action ID="moveTo" x="2" y="3"/>
      <Action ID="moveTo" x="0" y="0"/>
    </Sequence>
  </BehaviorTree>
</root>
```

Task 3

Prompt

```
<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\nThe behavior tree represents a mobile robot tasked to
visit two locations: (7,1) and (4,8). The first location may become
unreachable. If this happens, the location is skipped. The available actions
are: "moveTo", "CheckReachable" [/INST] <root BTCPP_format="4">
```

```

    <BehaviorTree>
      <Fallback>
        <ReactiveSequence>
          <CheckReachable />
          <MoveTo x="7" y="1"/>
        </ReactiveSequence>
        <MoveTo x="4" y="8"/>
      </Fallback>
    </BehaviorTree>
  </root> </s><s>[INST] The behavior tree represents a mobile robot tasked to
visit a sequence of locations: ((0,0), (2,3), (4, 7), (5, 11)). During
navigation a location may become unreachable, if this happens, skip it and
move to the next one. The available actions are: "moveTo", "CheckReachable",
"Continue" [/INST]

```

Output

```

[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\nThe behavior tree represents a mobile robot tasked to
visit two locations: (7,1) and (4,8). The first location may become
unreachable. If this happens, the location is skipped. The available actions
are: "moveTo", "CheckReachable" [/INST] <root BTCPP_format="4">

```

```

  <BehaviorTree>
    <Fallback>
      <ReactiveSequence>
        <CheckReachable />
        <MoveTo x="7" y="1"/>
      </ReactiveSequence>
      <MoveTo x="4" y="8"/>
    </Fallback>
  </BehaviorTree>
</root> [INST] The behavior tree represents a mobile robot tasked to visit
a sequence of locations: ((0,0), (2,3), (4, 7), (5, 11)). During navigation
a location may become unreachable, if this happens, skip it and move to the
next one. The available actions are: "moveTo", "CheckReachable", "Continue"
[/INST] <root BTCPP_format="4">
  <BehaviorTree ID="root">
    <Fallback>
      <ReactiveSequence>

```

```

    <Repeat num_cycles="1">
      <Sequence>
        <GetUnreachedAction />
        <SubTree ID="UnreachedLocation" />
      </Sequence>
    </Repeat>
    <Sequence>
      <GetLocationsAction x_coords="(0,0), (2,3), (4,7),
(5,11)" y_coords="0,2,4,7,11" />
      <ForceSuccess>
        <Sequence>
          <GetAction action="moveTo" x="0" y="0" />
          <MoveTo x="0" y="0" />
        </Sequence>
        <Sequence>
          <GetAction action="moveTo" x="2" y="3" />
          <MoveTo x="2" y="3" />
        </Sequence>
        <Sequence>
          <GetAction action="moveTo" x="4" y="7" />
          <MoveTo x="4" y="7" />
        </Sequence>
        <Sequence>
          <GetAction action="moveTo" x="5" y="11" />
          <MoveTo x="5" y="11" />
        </Sequence>
      </ForceSuccess>
    </Sequence>
  </ReactiveSequence>
  <Sequence>
    <GetUnreachableLocation />
    <SkipNode />
  </Sequence>
</Fallback>
</BehaviorTree>
</root>

```

Task 4

Prompt

```
<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\nThe behavior tree represents a mobile manipulator
tasked to visit a location at (7,1). After reaching the location, the mobile
manipulator activates the robotic arm. The available actions are: "moveTo",
"activateManipulator" [/INST] <root BTCPP_format="4">
```

```
  <BehaviorTree>
    <Sequence>
      <MoveTo x="7" y="1"/>
      <ActivateManipulator/>
    </Sequence>
  </BehaviorTree>
```

```
</root> </s><s>[INST] he behavior tree represents a mobile manipulator
tasked to visit a sequence of locations: ((0,0), (2,3), (4, 7), (5, 11)).
After reaching each location, the mobile manipulator activates the robotic
arm. The available actions are: "moveTo", "activateManipulator" [/INST]
```

Output

```
[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\nThe behavior tree represents a mobile manipulator
tasked to visit a location at (7,1). After reaching the location, the mobile
manipulator activates the robotic arm. The available actions are: "moveTo",
"activateManipulator" [/INST] <root BTCPP_format="4">
```

```
  <BehaviorTree>
    <Sequence>
      <MoveTo x="7" y="1"/>
      <ActivateManipulator/>
    </Sequence>
  </BehaviorTree>
```

```
</root> [INST] he behavior tree represents a mobile manipulator tasked to
visit a sequence of locations: ((0,0), (2,3), (4, 7), (5, 11)). After
reaching each location, the mobile manipulator activates the robotic arm.
The available actions are: "moveTo", "activateManipulator" [/INST] <root
BTCPP_format="4">
```

```
  <BehaviorTree>
    <Sequence>
      <MoveTo x="0" y="0"/>
```

```

        <ActivateManipulator/>
        <MoveTo x="2" y="3"/>
        <ActivateManipulator/>
        <MoveTo x="4" y="7"/>
        <ActivateManipulator/>
        <MoveTo x="5" y="11"/>
        <ActivateManipulator/>
    </Sequence>
</BehaviorTree>
</root>

```

Task 5

Prompt

<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a behavior tree, and your objective is to express this behavior tree in XML format.\n<</SYS>>\n\nThe behavior tree represents a mobile robot tasked asked to explore an area. The available actions are:

"generateNextDestination", "moveToDestination" [/INST] <root
BTCPP_format="4">

```

    <BehaviorTree>
        <Sequence>
            <generateNextDestination />
            <moveToDestination />
        </Sequence>
    </BehaviorTree>

```

</root> </s><s>[INST] The behavior tree represents a mobile robot tasked to explore an area. The available actions are: "generateNextDestination", "moveToDestination", "CheckForExplorationComplete" [/INST]

Output

[INST] <<SYS>>\nYou will be provided a summary of a task performed by a behavior tree, and your objective is to express this behavior tree in XML format.\n<</SYS>>\n\nThe behavior tree represents a mobile robot tasked asked to explore an area. The available actions are:

"generateNextDestination", "moveToDestination" [/INST] <root
BTCPP_format="4">
 <BehaviorTree>

```

        <Sequence>
            <generateNextDestination />
            <moveToDestination />
        </Sequence>
    </BehaviorTree>
</root> [INST] The behavior tree represents a mobile robot tasked to
explore an area. The available actions are: "generateNextDestination",
"moveToDestination", "CheckForExplorationComplete" [/INST] <root
BTCP_format="4">
    <BehaviorTree ID="ExploredArea">
        <Fallback>
            <Sequence>
                <action ID="generateNextDestination" name="Generate Next
Destination" />
                <action ID="moveToDestination" name="Move to Destination" />
            </Sequence>
            <action ID="CheckForExplorationComplete" name="Check if
Exploration is Complete" />
        </Fallback>
    </BehaviorTree>
</root>

```

Task 6

Prompt

```

<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n</SYS>>\n\nThe behavior tree represents a manipulator tasked to
find a target object. The manipulator moves in different locations and check
for the presence of a target object. The available actions are:
"moveToNewConfiguration", "CheckForTarget" [/INST] <root BTCP_format="4">
    <BehaviorTree>
        <Sequence>
            <MoveToNewConfiguration />
            <CheckForTarget />
        </Sequence>
    </BehaviorTree>
</root> </s><s>[INST] The behavior tree represents a manipulator tasked to
find and reach a target. The manipulator moves in different locations and

```


check for the presence of a target object. When the target is found, approach it. The available actions are: "moveToNewConfiguration", "CheckForTarget", "ApproachTarget" [/INST]

Output

```
[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
robot, and your objective is to express this task as a behavior tree in XML
format.\n</SYS>>\n\nThe behavior tree represents a manipulator tasked to
find and reach a target. The manipulator moves in different locations and
check for the presence of a target object. When the target is found,
approach it. The available actions are: "moveToNewConfiguration",
"CheckForTarget", "ApproachTarget" [/INST] <root
main_tree_to_execute="MainTree">
  <BehaviorTree ID="MainTree">
    <Sequence>
      <Fallback>
        <Sequence>
          <Action ID="moveToNewConfiguration" goal_pose="
{goal_pose}" />
          <Sequence>
            <Action ID="CheckForTarget" target="{target}" />
            <Fallback>
              <Sequence>
                <Action ID="ApproachTarget" target="
{target}" />
              </Sequence>
            <Action ID="MoveBack" />
          </Fallback>
        </Sequence>
      </Sequence>
      <Action ID="MoveBack" />
    </Fallback>
  </Sequence>
</BehaviorTree>
</root>
```

Task 7

Prompt

```

<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\n\nThe behavior tree represents a manipulator tasked to
perform a pick and place routine. The manipulator observe the item and
estimates a grasp. When the grasp is successfully estimated, the manipulator
picks the item and drop it to a predefined location. After the drop, the arm
moves to a resting position. The available actions are:
"performObservation", "estimateGrasp", "Pick", "Drop", "moveToRestPosition",
"moveToDropPositon" [/INST] <root BTCPP_format="4">

```

```

  <BehaviorTree>
    <Sequence>
      <performObservation />
      <estimateGrasp />
      <Pick />
      <MoveToDropPosition />
      <Drop />
      <MoveToRestPosition />
    </Sequence>
  </BehaviorTree>

```

```

</root> </s><s>[INST] The behavior tree represents a manipulator tasked to
perform a pick and place routine. The manipulator observe the item from
multiple points of view and each time tries to estimate a grasp. If the
systems fails to identify a grasp after five observations, the action fails
and the arm return to a resting position. When the grasp is successfully
estimated, the manipulator picks the item and drop it to a predefined
location. After the drop, the arm moves to a resting position. The available
actions are: "performObservation", "estimateGrasp", "Pick", "Drop",
"moveToRestPosition", "moveToDropPositon" [/INST]

```

Output

```

[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\n\nThe behavior tree represents a manipulator tasked to
perform a pick and place routine. The manipulator observe the item and
estimates a grasp. When the grasp is successfully estimated, the manipulator
picks the item and drop it to a predefined location. After the drop, the arm
moves to a resting position. The available actions are:
"performObservation", "estimateGrasp", "Pick", "Drop", "moveToRestPosition",

```

```
"moveToDropPositon" [/INST] <root BTCPP_format="4">
```

```
  <BehaviorTree>
```

```
    <Sequence>
```

```
      <performObservation />
```

```
      <estimateGrasp />
```

```
      <Pick />
```

```
      <MoveToDropPosition />
```

```
      <Drop />
```

```
      <MoveToRestPosition />
```

```
    </Sequence>
```

```
  </BehaviorTree>
```

```
</root> [INST] The behavior tree represents a manipulator tasked to perform a pick and place routine. The manipulator observe the item from multiple points of view and each time tries to estimate a grasp. If the systems fails to identify a grasp after five observations, the action fails and the arm return to a resting position. When the grasp is successfully estimated, the manipulator picks the item and drop it to a predefined location. After the drop, the arm moves to a resting position. The available actions are:
```

```
"performObservation", "estimateGrasp", "Pick", "Drop", "moveToRestPosition",
```

```
"moveToDropPositon" [/INST] <root BTCPP_format="4">
```

```
  <BehaviorTree ID="root">
```

```
    <Fallback>
```

```
      <Sequence>
```

```
        <Action ID="performObservation" rate="3" />
```

```
        <Fallback>
```

```
          <Sequence>
```

```
            <Action ID="estimateGrasp" item="item" />
```

```
            <Sequence>
```

```
              <Action ID="Pick" />
```

```
              <Action ID="Drop" target="item" />
```

```
            </Sequence>
```

```
          </Sequence>
```

```
          <Action ID="FAILURE" />
```

```
        </Fallback>
```

```
        <Action ID="moveToRestPosition" />
```

```
      </Sequence>
```

```
      <Action ID="FAILURE" />
```

```
    </Fallback>
```

```
  </BehaviorTree>
```

```
</root>
```

Task 8

Prompt

```
<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\nThe behavior tree represents a manipulator tasked to
push buttons in a specific sequence to to transform raw materials into
processed materials. Use "Button R" to receive the raw materials. Use
"Button A" to activate the system. The available actions are: "pressButton"
[/INST] <root BTCPP_format="4">
```

```
  <BehaviorTree>
    <Sequence>
      <PressButton label="Button R"/>
      <PressButton label="Button A"/>
    </Sequence>
  </BehaviorTree>
```

```
</root> </s><s>[INST] The behavior tree represents a manipulator tasked to
push buttons in a specific sequence to to transform raw materials into
processed materials. Use "Button R" to receive the raw materials. Use
"Button P" to start the processing. Use "Button C" to complete the
processing. The system has to periodically check the status of the materials
to decide if the processing has been completed. The available actions are:
"pressButton", "evaluateProcessing" [/INST]
```

Output

```
[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\nThe behavior tree represents a manipulator tasked to
push buttons in a specific sequence to to transform raw materials into
processed materials. Use "Button R" to receive the raw materials. Use
"Button A" to activate the system. The manipulator has to first receive the
raw material and then activate the system. The available actions are:
"pressButton" [/INST] <root BTCPP_format="4">
```

```
  <BehaviorTree>
    <Sequence>
      <PressButton label="Button R"/>
      <PressButton label="Button A"/>
    </Sequence>
```

```

    </BehaviorTree>
</root> [INST] The behavior tree represents a manipulator tasked to push
buttons in a specific sequence to to transform raw materials into processed
materials. Use "Button R" to receive the raw materials. Use "Button P" to
start the processing. Use "Button C" to complete the processing. The
manipulator has to first receive the raw material, then start the
processing, and finally complete the processing. The manipulator has to
periodically check the status of the materials to decide when the processing
is complete. The available actions are: "pressButton", "evaluateProcessing"
[/INST] <root BTCPP_format="4">
  <BehaviorTree ID="MainTree">
    <Sequence>
      <Fallback>
        <Condition ID="IsButtonRPressed"/>
        <Sequence>
          <Action ID="pressButton" label="Button R"/>
          <ForceSuccess>
            <Action ID="evaluateProcessing"/>
          </ForceSuccess>
        </Sequence>
        <Action ID="AlwaysFailure"/>
      </Fallback>
      <Fallback>
        <Condition ID="IsButtonPPressed"/>
        <Sequence>
          <Action ID="pressButton" label="Button P"/>
          <ForceSuccess>
            <Action ID="evaluateProcessing"/>
          </ForceSuccess>
        </Sequence>
        <Action ID="AlwaysFailure"/>
      </Fallback>
      <Fallback>
        <Condition ID="IsButtonCPressed"/>
        <Sequence>
          <Action ID="pressButton" label="Button C"/>
        </Sequence>
      </Fallback>
    </Sequence>
  </BehaviorTree>
</root>

```

```
</BehaviorTree>
</root>
```

Task 9

Prompt

```
<s>[INST] <<SYS>>\nYou will be provided a summary of a task performed by a
behavior tree, and your objective is to express this behavior tree in XML
format.\n<</SYS>>\n\nThe behavior tree represents a mobile manipulator
tasked to move between multiple stations to assemble a product. The order of
actions is the following. Start from parking position and move to "Station
A". In "Station A" pick up "Component A" and put it on the robot tray. Move
to "Station C" and deliver "Component A". Activate the assembly process.
collect the finished product and put it on the robot tray. Deliver the
finished product to the parking position. The available actions are:
"moveTo", "Pick", "Drop", "ActivateProcess" [/INST] <root BTCPP_format="4">
```

```
  <BehaviorTree>
    <Sequence>
      <MoveTo location="Station A"/>
      <Pick from="station" item="Component A"/>
      <Drop to="tray"/>
      <MoveTo location="Station C"/>
      <Pick from="tray" item="Component A"/>
      <Drop to="station"/>
      <ActivateProcess/>
      <Pick from="station" item="Finished product"/>
      <Drop to="tray"/>
      <MoveTo location="Park"/>
      <Pick from="tray" item="Finished product"/>
      <Drop to="station"/>
    </Sequence>
  </BehaviorTree>
```

```
</root> </s><s>[INST] The behavior tree represents a mobile manipulator
tasked to move between multiple stations to assemble a product. The order of
actions is the following. Start from parking position and move to "Station
A". In "Station A" pick up "Component A" and put it on the robot tray. Move
to "Station B" and collect "Component B" and put it on the robot tray. Move
to "Station C" and deliver "Component A" and "Component B". Move to "Station
D" and activate the assembly process. Return to "Station C", collect the
```

finished product and put it on the robot tray. Deliver the finished product to the parking position. In case of failure of any of the actions, the mobile manipulator returns to parking position and empties its tray. The available actions are: "moveTo", "Pick", "Drop", "ActivateProcess", "EmptyTray" [/INST]

Output

[INST] <<SYS>>\nYou will be provided a summary of a task performed by a behavior tree, and your objective is to express this behavior tree in XML format.\n<</SYS>>\n\nThe behavior tree represents a mobile manipulator tasked to move between multiple stations to assemble a product. The order of actions is the following. Start from parking position and move to "Station A". In "Station A" pick up "Component A" and put it on the robot tray. Move to "Station C" and deliver "Component A". Activate the assembly process. collect the finished product and put it on the robot tray. Deliver the finished product to the parking position. The available actions are: "moveTo", "Pick", "Drop", "ActivateProcess" [/INST] <root BTCPP_format="4">

<BehaviorTree>

<Sequence>

<MoveTo location="Station A"/>

<Pick from="station" item="Component A"/>

<Drop to="tray"/>

<MoveTo location="Station C"/>

<Pick from="tray" item="Component A"/>

<Drop to="station"/>

<ActivateProcess/>

<Pick from="station" item="Finished product"/>

<Drop to="tray"/>

<MoveTo location="Park"/>

<Pick from="tray" item="Finished product"/>

<Drop to="station"/>

</Sequence>

</BehaviorTree>

</root> [INST] The behavior tree represents a mobile manipulator tasked to move between multiple stations to assemble a product. The order of actions is the following. Start from parking position and move to "Station A". In "Station A" pick up "Component A" and put it on the robot tray. Move to "Station B" and collect "Component B" and put it on the robot tray. Move to "Station C" and deliver "Component A" and "Component B". Move to "Station D"

and activate the assembly process. Return to "Station C", collect the finished product and put it on the robot tray. Deliver the finished product to the parking position. In case of failure of any of the actions, the mobile manipulator returns to parking position and empties its tray. The available actions are: "moveTo", "Pick", "Drop", "ActivateProcess",

"EmptyTray" [/INST] <root BTCPP_format="4">

<BehaviorTree ID="BehaviorTree">

<Sequence>

<Action ID="moveTo" location="Station A"/>

<Fallback>

<Action ID="Pick" from="station" item="Component A"/>

<Action ID="moveTo" location="Station C"/>

<Action ID="Pick" from="station" item="Component A"/>

<Action ID="Pick" from="station" item="Component B"/>

<Action ID="moveTo" location="Station D"/>

<Action ID="ActivateProcess"/>

<Action ID="moveTo" location="Park"/>

</Fallback>

<Action ID="EmptyTray"/>

<Action ID="moveTo" location="Station C"/>

<Action ID="Pick" from="station" item="Finished product"/>

<Action ID="Drop" to="station" item="Finished product"/>

</Sequence>

</BehaviorTree>

</root>